



**PATENT
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: William R. McDonnell GROUP ART UNIT: 3643
SERIAL NO.: 10/031,925 EXAMINER: Robert P. Swiatek
FILED: January 23, 2002 DOCKET NO.: MCDW-8238
FOR: LAUNCH AND RECOVERY SYSTEM FOR UNMANNED AERIAL VEHICLES

National Phase of PCT/US00/20099

DECLARATION UNDER 37 CFR 1.131

This declaration is being submitted to establish reduction to practice of the invention shown and claimed in the above-identified application prior to June 8, 1999, the earliest priority date of McGeer et al., U.S. Patent 6,264,140.

The person making this declaration is the inventor, William R. McDonnell.

A prototype aircraft was built in the United States at my direction before June 8, 1999. The prototype aircraft was in the form of a delta wing pusher, radio-controlled Force One Kit airplane built from a kit supplied by Balsa USA. The kit was modified by providing left and right hook and latch mechanisms on the leading edges of the left and right wings, respectively. The hook and latch mechanism was designed to capture a vertically oriented arrestment line. The prototype aircraft is shown in a photograph attached hereto as Exhibit A.

A prototype arrestment device was also built in the United States at my direction before June 8, 1999. The arrestment device included five vertical arrestment lines spaced apart a distance less than the wingspan of the aircraft. These arrestment lines were tied at the top and bottom to horizontal running lines

that extended between two vertical poles planted in the ground and stabilized with lines running down to stakes in the ground. The poles were made out of PVC pipes and the lines were conventional nylon rope that you would find in any hardware store. Knots were placed in the vertically oriented arrestment lines with washers over the knots to provide stops to prevent the aircraft from sliding down the arrestment lines.

Before June 8, 1999, the aircraft and arrestment device were tested in the United States as a system for arresting the flight of the aircraft. The aircraft was flown in a controlled flight between and approximately perpendicular to two of the vertical arrestment lines, deflecting them laterally into engagement with the hook and latch mechanisms on the wings of the aircraft. The aircraft was arrested by the lines and undamaged. The arrestment process is shown in a set of photographs numbered 1-5 and attached hereto as Exhibit B.

Also before June 8, 1999, the arrestment device was modified at my direction in the United States, so that it had only a single vertical arrestment line held up by the same arrangement.

Before June 8, 1999, the aircraft and the modified arrestment device were tested in the United States as a system for arresting the flight of the aircraft. The aircraft was flown in a controlled flight that caused the left wing of the aircraft to strike the vertical arrestment line, deflecting the line laterally while the line slid along a lead edge of the wing into engagement with the hook and latch mechanisms on the wing of the aircraft. The aircraft extended the line in the direction of flight and was then drawn back. Stops on the arrestment line

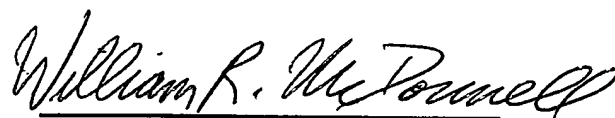
prevented the aircraft from sliding down the line and held the aircraft in the air.
The arrestment process is shown in a set of photographs numbered 1-4 and attached hereto as Exhibit C.

The foregoing Exhibits and statement show my conception and reduction to practice of the invention of the present application (as it relates to recovery of an aircraft) before June 8, 1999, the earliest priority date of McGeer et al., U.S. Patent 6,264,140.

As the person signing below:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,



William R. McDonnell

Date: 28 May 2003